

## **ASSESSING THE IMPACT OF CONVERGENT THINKING ABILITY ON ENGLISH SPEAKING PROFICIENCY**

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### **Abstract**

Speaking in English is an important skill to master to gain an upper hand in a person's academic and professional life. Different countries, where English is considered to be a foreign language, are emphasizing developing English language learning and teaching strategies to gain the status of globalization. To achieve this goal, English speaking skills play a crucial role as it is an effective mode of communication to connect with the world. This created an immense need to research how to develop the speaking skills of students studying at the university level. Therefore, this study researched the impact of convergent thinking ability to enhance English speaking proficiency among students. The instrument used to obtain the results are—Remote Associates Test (RAT) and Speaking Proficiency English Assessment Kit (SPEAK). At the end of the research, it was determined that if the education sector focuses on developing students' convergent thinking ability then the process of enhancing English speaking proficiency becomes easier.

**Keywords:** convergent thinking, English, speaking proficiency

### **Introduction**

The English language is a significant language of the world and it is the official language in a large number of countries (Al-Eiadeh, Al. Sobh, Al-Zoubi & Al-Khasawneh, 2016). It has spread, as a dominant language, extensively because of its high demand in important fields of this globalized world, such as international media language, scientific research, international communication, technology, tourism, etc. (Al-Eiadeh, Al. Sobh, Al-Zoubi & Al-Khasawneh, 2016). For example, Asian countries, as an important part of globalization, have accepted English as their second language or a foreign language (Choi & Lee, 2008). Asian countries like Bangladesh, Korea, Japan, and China give high priority to English language teaching and learning in their foreign language policy because, proficiency in this language has the role of a gatekeeper of individual career or welfare as a national development (Choi & Lee, 2008; Powell & Powell, 2010).

Furthermore, English language proficiency has a major function in an individual's growth, thus English language education in Asia focuses extensively on all four skills, speaking, listening, reading, and writing (Powell & Powell, 2010). Accordingly, different researchers have shed light from different perspectives to enhance English language teaching and learning from an Asian context, for

example, Abanador, Buesa, Remo, and Manibo (2014) found that English language teachers in Asia are evolving to facilitate learner-centered classrooms and help students to become lifelong autonomous learners. Moreover, Borg and Alshumaimeri (2019) indicate that teachers can develop autonomous learners by setting achievable course objectives and ensuring learners' motivation for improved English language proficiency among students. Despite different research conducted to identify different factors that affect different skills in the English language (Moser, Zhu, Nguyen & Williams, 2018), there is a gap in the research area of an individual's cognitive thinking ability in relation to English speaking proficiency. Haseli and Rezaii (2013) focused on the application of critical thinking in the educational practices of higher education institutes in Bangladesh. However, the relationship between convergent thinking and English speaking proficiency has never been investigated in the Bangladeshi context.

Bangladesh is one of the largest populations in the world to be learning English as a second or foreign language (Hamid & Honan, 2012). Researchers also suggest focussing more on English at the tertiary level in Bangladesh as language plays an important role in developing a dynamic workforce in the country (Rahman & Pandian, 2018). English at the tertiary level requires more focus because the English language teaching policy has always suffered due to the uncertainty of the fundamental status of English in the country (Chowdhury & Kabir, 2014). In addition, according to Rahman and Pandian (2018), the lack of certainty is further intensified by the three different education systems present in the schools of Bangladesh: General education, Madrasah (religious) education, and English-medium education. To minimize the language proficiency discrepancies created by different education systems, tertiary education should emphasize enhancing communicative language rather than the grammatical structure of the language (Farooqui, 2014). Research conducted by Aziz (2018) finds that most tertiary students face difficulties communicating by speaking in English. Thus, it is essential to conduct thorough research to improve English language speaking proficiency from the context of Bangladeshi tertiary level, so that the students can develop personally and for the nation. This research aims to study the relationship between Bangladeshi students' convergent thinking ability and their English speaking proficiency.

## **Literature Review**

### ***English language speaking skill***

All four skills of the English language are unique to each other and all are equally important to achieve competence in the language. Sadiku (2015) terms speaking as "When you have words read, ideas are written and thoughts heard, all you need is to express- your speaking skill." That is, speaking determines the expressiveness of a person and this skill is highly regarded for communicative purposes. Furthermore, speaking fluency of individual points to his or her overall competence in the language because, speaking skill includes the correct use of vocabulary, grammar, sentence structure, listening, pronunciation, etc. in a controlled manner which conveys meaningful ideas to others (Matin, 2013; Nunan, 2003; Harmer, 2001). Speaking proficiency is imperative for human beings to interact and connect with fellow beings (Yonsisno, 2015). In addition, enhanced speaking skills are beneficial for both speakers and their work organizations, as it

helps in job interviews, interacting with international clients, business presentations, ceremonial speaking activities, etc. (Osborn, Osborn & Osborn, 2019. Research by Zaremba (2003), indicates that in the process of recruiting new employees, speaking and communication skills are often given high regard ahead of work experience, motivation, and academic credentials. Thus, it is important to focus on improving the teaching and learning process of speaking skills (Trent, 2009; Zhang, 2009; Bailey & Nunan, 2005).

Luoma (2004) and Richards (2003) mention that spoken discourse can be both planned or unplanned consisting of several composed ideas involving reciprocity and at times involve variation in speaking purpose and context. Bygate (2009) mentions that to achieve proficiency in speaking, studying the knowledge of vocabulary, grammar, sentence structure, listening, pronunciation, etc. is not enough rather it is required to apply the knowledge effectively in communication. This notion of using language for communicative purposes is supported by the concept of communicative competence. There are several models present for communicative competence, among which Bachman's model of communicative competence (1990) is more comprehensive and adds substantial value to the provision of effective language use (Amirian, Moqaddam & Moqaddam, 2017).

### ***Communicative competence***

Bachman (1990) mentions in his communicative competence model that the general characteristics of the language users (gender, nationality, ethnicity, cognitive style, etc.), their topical knowledge, and their language ability affect the communicative language ability and linguistic performance of the learners (Amirian, Moqaddam & Moqaddam, 2017). Furthermore, the model diversifies itself into a multi-faceted one by adding the strategic competence, which is defined as having a "set of meta-cognitive strategies, which can be thought of as higher-order executive process providing a cognitive management function in language use" (Amirian, Moqaddam & Moqaddam, 2017). That is, the strategic competence of Bachman's model implies the application of individual application of their metacognitive principles (planning, achieving, controlling, and correcting) on several forms of language activity, like- reception, interaction, production and meditation (Bagarić & Mihaljević Djigunović, 2007; Amirian, Moqaddam & Moqaddam, 2017). One major strand of strategic competence is the ability to solve problems (Suh & Seshaiyer, 2016), thus strategic competence can be considered to be in line with convergent thinking.

### ***Convergent thinking ability***

Convergent thinking includes the process of distinguishing the best possible solution to a problem or issue by using deductive reasoning (Lee & Therriault, 2013; Webb, Little, Cropper & Roze, 2017). This aforesaid concept of thinking is a type of creative thinking (Holt, 2015). The classic definition of convergent thinking is provided by Guilford (1950) as- moving linearly and logically toward a single solution. The whole concept of convergent thinking can be made clear by understanding its different functions like assembling information, identifying the known, reapplying set techniques, and preserving the already known (Cropley, 2006). As convergent thinking and strategic competence include a similar cognitive process of problem-solving ability, thus convergent thinking can have a substantive

relationship with language proficiency, more specifically speaking proficiency as it is directly related to communication competence. Several studies identified a definitive relationship between convergent thinking and several areas of pedagogy.

### ***Previous studies***

A study conducted by Mather, Jones, and Estes (2014) tried to determine the relationship between convergent and divergent thinking and verbal analogy. The result of the study indicates that convergent and divergent thinking positively affects the verbal analogy of individuals. This study also sheds light on the connection between analogical reasoning and creative cognition.

Hajesfandiari, Mehrdad, and Karimi (2014) identified that convergent and divergent thinking tasks have a positive effect on teaching articles to EFL learners. Moreover, it was found through the same research that convergent thinking tasks are more effective because students learn better by presenting examples and appealing to their previous knowledge for reaching the best possible solution rather than brainstorming and coming up with different solutions.

Marashi and Tahan-Shizari (2015) found in their research that convergent thinking tasks promote better participation and motivation from students because they can initiate their writing with sufficient input which in turn helps them to come up with new ideas and motivation to be active in their learning process. The study also suggests ELT teachers use convergent thinking tasks to make learners participative and boost their creative learning.

Another study by Azimi, Behjat, and Kargar (2016) represents the finding that Iranian EFL learners' reading comprehension shows remarkable improvement when convergent and divergent thinking tasks are employed in the class. In addition, the authors also suggest that teachers can yield positive results in the language learning process by designing convergent thinking tasks for different language skills like reading, writing, listening, and speaking.

### ***Current study***

This study tried to determine the relationship between students' convergent thinking ability and their English language proficiency. In the context of this research, convergent thinking is students' ability to use logic and analytical thinking to narrow ideas to the one best-suited idea. Considering the aforesaid definition of convergent thinking, this research used the Remote Associates Test (RAT) which is not only widely used to determine convergent thinking but also used to study insight, problem-solving, and creative thinking in different research (Kajic & Wennekers, 2015). On the other hand, the Speaking Proficiency English Assessment Kit (SPEAK) was used to determine the English language proficiency of students. This study aimed to use the collected data from RAT and SPEAK to answer the following question: "Do students with convergent thinking ability have better English language speaking proficiency?"

## **Methods**

### ***Participants***

The study used 140 undergraduate freshers, from a private university in Bangladesh as participants. The participants in the present study included both males and females between the ages of 18-20. All the students in the study have

completed their 12 years of school education and the English language was a compulsory subject from class one. To control discrepancies, homogeneity was maintained by only using the participation of students who are all in their first semester. Furthermore, more than 30 participants were used, as it was suggested by Groom and Littlemore (2012) that the minimum sample size of experimental or correlational studies is 30. It is important to keep in mind that the students are not all from the same department, however, they all are attending the same English language course in their university and all of them are in their first semester.

### ***Instruments***

#### ***Remote Associates Test (RAT)***

Remote Associates Test (RAT) (Mednick, 1962) was employed to determine students' convergent thinking ability. Previous research has identified positive correlations between RAT scores and different indicators of convergence creativity (Aiello, Jarosz, Cushen & Wiley, 2012; Storm, Angello & Bjork, 2011). The test was produced based on the associative theory of creativity where participants need to solve RAT items by identifying a link among words that lacks any obvious relation among each other. For instance, participants are required to analyze the three words: light, birthday, wax, and identify the fourth remotely associated word (answer: candle) (Lee, Huggins & Theriault, 2014). Lee, Huggins, and Theriault (2014) reached a consensus in their research that RAT is a convergent thinking measure and reported a Spearman-Brown reliability coefficient of  $r = .92$  and  $r = .91$  from two separate samples. The test consists of 30 items and the participants are allowed to use 40 minutes to complete it. The test takers' score was the correct number of answers.

#### ***Speaking Proficiency English Assessment Kit (SPEAK)***

To measure the speaking proficiency of the participants, the Speaking Proficiency English Assessment Kit (SPEAK) was administered among the participants. In response to the requirement of developing an oral proficiency measure, Educational Testing Service (ETS) designed TSE and its institutional version SPEAK. is a standardized instrument developed by Educational Testing Service (ETS)? According to Brown, Fishman, and Jones (1990), TSE/SPEAK is an appropriate speaking proficiency instrument. Also, a study conducted by Clark and Swinton (1980) found positive correlations between TSE scores of instructors and students' evaluation of instructors' communication abilities such as lectures, understanding students' questions, and interaction with students.

### ***Data Analysis***

Data analysis for this research used descriptive statistical analysis and correlational statistical analysis. To describe the profile of participants, the mean score of convergent thinking ability, and the mean score of speaking proficiency, descriptive analysis were utilized. Additionally, the correlational statistical analysis was used to analyze the relationship between students' convergent thinking ability and students' English speaking proficiency. Moreover, the multiple regression method was implemented to identify the effect of convergent thinking on English speaking proficiency. This study used the SPSS program version \_\_ to analyze the data collected from the participants. Only selective data were used for analysis to

ensure the quality of the data. The data was screened by not including the respondents who lacked to give full cooperation while responding to the questionnaire.

## Findings and Discussion

### *Descriptive analysis*

#### *Demographic analysis of respondents*

This research selected 140 responses in total, among which 92 respondents were female (65.7%) and 48 respondents were male (34.3%). The participants are all in the age group of 18-20 years. The demographics of the respondents are explained in the following table:

Table 1. Demographic analysis of respondents (N=140)

|        | Demographic     | Frequency | %     |
|--------|-----------------|-----------|-------|
| Gender | Male            | 48        | 34.30 |
|        | Female          | 92        | 65.70 |
| Age    | 18-20 years old | 140       | 100   |

#### *Convergent thinking ability*

For this study, the mean score was calculated for convergent thinking ability using the Remote Associates Test (RAT) scores derived from the respondents of this study. This research used a modified version of Amiruddin, Ngardiran, Zainudin, and Ngadiman's (2016) mean interpretation range. Originally, there are three categories of mean interpretation- low (1.00-2.33), moderate (2.34-3.67), and high (3.68-5.00) (Amiruddin, Ngardiran, Zainudin & Ngadiman, 2016). However, this research modified the scale to a suitable range that accommodates 30 points; the interpretation used are: very low (0.00-5.99), low (6.00-11.99), moderate (12.00-17.99), high (18.00-23.99) and very high (24.00-30.00).

The mean value of convergent thinking ability is at high levels, that is M=18.53 and SD=3.45. The data are showcased in the following Table 2:

Table 2. Convergent thinking scores

| Convergent Thinking                | Mean  | Standard Deviation | Level    |
|------------------------------------|-------|--------------------|----------|
| Convergent thinking score (Male)   | 17.79 | 4.09               | Moderate |
| Convergent Thinking score (Female) | 18.91 | 3.07               | High     |
| Overall score                      | 18.53 | 3.48               | High     |

The above data indicate that female students aged between 18-20 years have higher convergent thinking abilities than male students. Thus, it can be said that females are prone to be better at methodologically solving problems, compared to the male gender. However, it is important to point out that, according to the data of this study, males are not significantly behind in the score of convergent thinking. The insignificant difference between males and females in terms of

creative thinking is supported by other studies conducted by Chan (2005), Kaufman (2006), and Volf and Tarasova (2013).

#### *English speaking proficiency*

Similar to convergent thinking ability, the data were used to derive the mean score of the two constructs of English speaking proficiency, which are fluency and accuracy. Again, the modified version of Amiruddin, Ngardiran, Zainudin, and Ngadiman's (2016) mean interpretation was used. In this case, the range of mean interpretation was set to accommodate 10 points; the interpretation used are very low (0.00 - 1.99), low (2.00-3.99), moderate (4.00-5.99), high (6.00-7.99) and very high (8.00-10.00).

The data from 140 respondents show that fluency ( $M=3.59$ ;  $SD=0.76$ ) while speaking is better than accuracy ( $M=4.35$ ;  $SD=4.45$ ) among Bangladeshi first-semester university students. The data is represented in the following Table 3:

Table 3. Speaking proficiency score

| Speaking Proficiency | Mean | Standard Deviation | Level |
|----------------------|------|--------------------|-------|
| Accuracy             | 3.59 | 0.76               | High  |
| Fluency              | 3.83 | 0.56               | High  |
| Overall score        | 7.42 | 1.21               | High  |

The third table of this research conduce that Bangladeshi students are slightly more fluent in English speaking than they are accurate. Though in the case of both accuracy and fluency, the students are at a high level. However, this data does not depict the level of accuracy and fluency among all Bangladeshi students aged between 18-20 years. The participant's speaking scores are exclusive to a high level, because, they are already enrolled in a prestigious university in Bangladesh, where they had to get selected through an admission exam. This selective group of participants will not affect the findings of this research, because, the study is focused on understanding the speaking proficiency of students about convergent thinking ability. The next part of the paper will focus on the core part of the research, which is to define the relationship between convergent thinking ability and speaking proficiency.

#### *The relationship between convergent thinking ability and English speaking proficiency*

The correlation relationship between convergent thinking ability and English speaking proficiency is depicted in Figure 1 below:

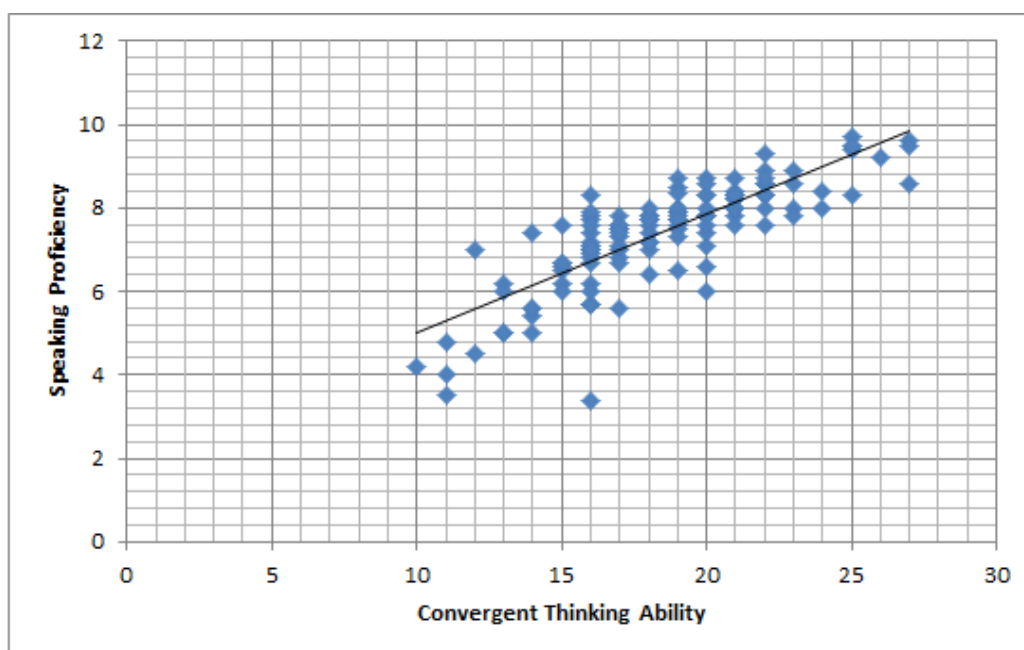


Figure 1. Relationship between speaking proficiency and convergent thinking ability

The Pearson correlation parametric statistic is used to understand the relationship between convergent thinking ability and English speaking proficiency and the result is perceived as linear because the graph shows a value of  $R^2=0.816$  which indicates that 81.6% of the speaking proficiency score is directly contributed by the convergent thinking ability score of students.

The result concludes that it is important for students to have convergent thinking ability, not just for methodological thought process or to be a better problem solver, but, also to enhance speaking proficiency. This part of creative thinking skills will aid students to assemble all their language proficiency factors and provide output through speech. Moreover, the indication of the result that convergent thinking skill is essential for enhanced speaking proficiency is supported by another research where it was found that bilingualism and convergent thinking are positively related to each other (Hommel, Calzato, Fischer & Christoffels, 2011).

#### *Relationship between convergent thinking ability and speaking proficiency constructs (Accuracy and Fluency)*

According to Wang (2014), speaking competence has two constructs-accuracy and fluency which together determines the level of a student's communication ability in English. Analysis through Pearson correlation shows that the correlation coefficient value between the scores of accuracy and convergent thinking ability is  $R^2=0.794$ , which means that 79.4% of speaking accuracy is affected by convergent thinking ability. The figure below shows the linear relation between speaking accuracy and convergent thinking ability.

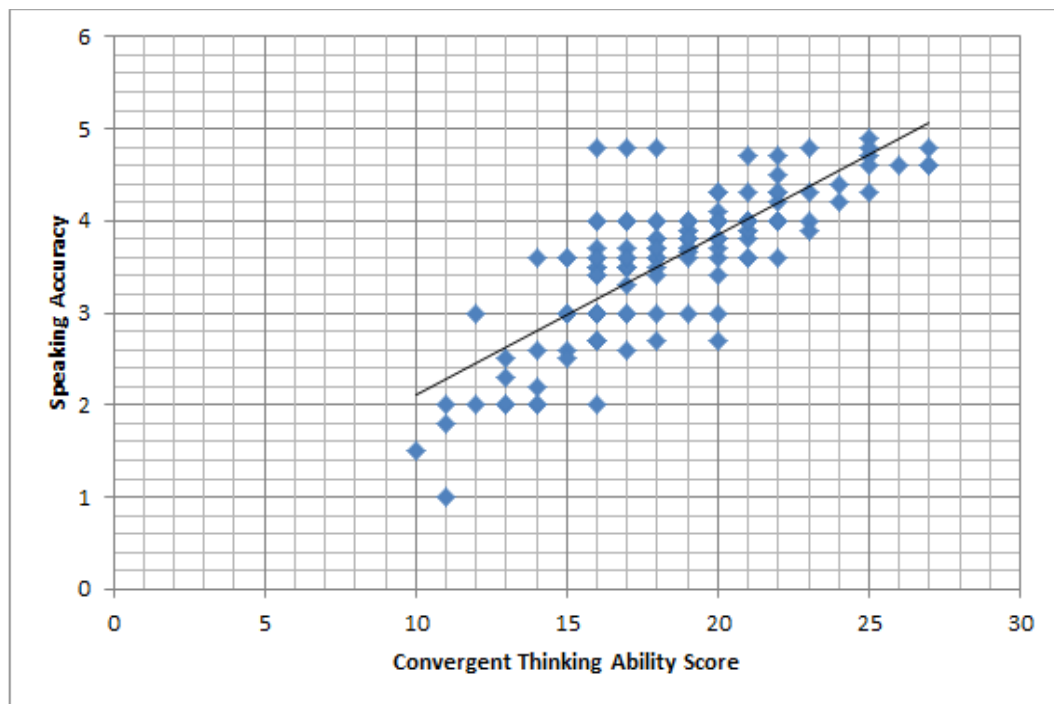


Figure 2. Relationship between speaking accuracy and convergent thinking ability

In addition, when the relationship between fluency and convergent thinking ability was analyzed, it showed that the Pearson coefficient value is  $R^2=0.682$  and it is interpreted as the idea that convergent thinking ability influences 68.2% of an individual's speaking fluency. The figure below shows the relationship between convergent thinking ability and speaking fluency.



Figure 3. Relationship between speaking fluency and convergent thinking ability

The Pearson coefficient relationship draws on the scenario that convergent thinking ability has more of an effect on students' accuracy while speaking than it does on fluency. This might be the case because accuracy includes correct pronunciation, vocabulary use, and accurate grammar, and possessing convergent thinking ability helps students to assemble all these factors to produce speech accurately and logically.

## Conclusion

It is important to conclude the paper with the major finding that developing convergent thinking ability in students is important to ensure better speaking proficiency. With this understanding, teachers can design their activities to incorporate convergent thinking tasks in a deductive manner. This will ensure that students can enhance their creative thinking for better speaking proficiency in their language class. Further research can be done on how teachers can design activities to improve convergent thinking among students. Also, it can be studied whether or not convergent thinking has any effect on writing skills.

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